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United States Patent

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*J. Todd Johnson*

Acting Commissioner of Patents and Trademarks

*Pamela Morton*

Attest



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# United States Patent [19] Falone et al.

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## [54] VIBRATION ABSORBING MATERIAL FOR HANDLES OF SPORTING EQUIPMENT

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[\*] Notice: This patent is subject to a terminal disclaimer.

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### Related U.S. Application Data

[63] Continuation-in-part of application No. 08/560,699, Nov. 20, 1995, Pat. No. 5,653,643.

[51] Int. Cl.<sup>6</sup> ..... A63B 53/14

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[58] Field of Search ..... 473/316, 321,  
473/300, 303, 523, 549, 568

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"On the Dynamics of the Swing of a Golf Club".

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### [57] ABSTRACT

A hand held article, such as a golf club, includes an elongated handle with an inner support structure mounted to the handle and a vibration absorbing material mounted around the inner support structure. The inner support structure includes a plurality of spaced rigid projections which extend into the vibration absorbing material to a location inwardly of the outer surface of the vibration absorbing material. In one embodiment the inner support structure is integral with the shaft of the handle. In another embodiment a sleeve is heat shrunk onto the shaft and the inner support structure and vibration absorbing material are mounted over the sleeve.

27 Claims, 3 Drawing Sheets

